



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/602,305 | 06/24/2003 | Wendelin J. Stark | 0796/67688 | 8278 |
| 7590 | 02/22/2006 | | EXAMINER | |
| Donald S. Dowden Cooper & Dunham LLP 1185 Avenue of the Americas New York, NY 10036 | | | VANOY, TIMOTHY C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1754 | |

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--|----------------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/602,305 Examiner Timothy C. Vanoy | STARK ET AL. Art Unit 1754 |
| Period for Reply | -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -- | |

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 06 February 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.
 4a) Of the above claim(s) 20-27 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-19 is/are rejected.
 7) Claim(s) 4,6-12,14 and 16-19 is/are objected to.
 8) Claim(s) 1-27 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 01 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>06/24/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-19 in the reply filed on Feb. 6, 2006 is acknowledged.

The traversal is on the ground(s) that the restriction is not compulsory.

This is not found persuasive because it is within the discretion of the examiner to impose a restriction requirement.

The applicants further argue that the searches for claims 1-19 and also for claims 20-27 are largely overlapping. If the requirement for restriction is not withdrawn then presumably two Examiners must search for identical subject matter, thereby utilizing the resources of the PTO to less than maximum advantage.

This is not found persuasive because the search for the claims 1-19 and also for the claims 20-27 is not largely overlapping, as argued by the applicants. Two examiners will not have to search for identical subject matter because the subject matter of the claims is divergent and the field of search for the different inventions is also divergent.

The applicants further argue that it is in the interest of the public to be able to determine from a study of a single document the metes and bounds of the claimed invention, rather than having to examine two such documents.

The argument ignores that there are multiple inventions in the same application and that it is unduly burdensome for the examiner to have to search and examine the extra inventions.

The requirement is still deemed proper and is therefore made FINAL.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed on June 24, 2003 does not fully comply with the requirements of 37 CFR 1.98(b) because the articles titled "Combustion Synthesis and Properties Of Nanostructured Ceria-Zirconia Solid Solutions" by Aruna et al. and "Controlled synthesis of nanostructured particles by flame spray pyrolysis" by Madler et al. do not set forth which journals these articles were published in. Since the submission appears to be *bona fide*, applicant is given **ONE (1) MONTH** from the date of this notice to supply the above mentioned omissions or corrections in the information disclosure statement. NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b). Failure to timely comply with this notice will result in the above mentioned information disclosure statement being placed in the application file with the noncomplying information **not** being considered. See 37 CFR 1.97(i).

Specification

Art Unit: 1754

- a) The abstract is objected to because it does not set forth any details of the claimed method for making the metal oxides.

Claim Objections

- a) Claims 4, 6, 7, 8, 9, 10, 11, 12, 14, 16, 17, 18 and 19 are objected to under 37 CFR 1.75(c) as being in improper form because they are multiple dependent claims which are dependent on other multiple dependent claims. See MPEP § 608.01(n).
- b) In claim 17, "atomic" is misspelled.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) In claims 2, 3, 6, 7, 8, 9, 10, 13, 15 and 19, the phrases "preferably", "more preferably" and "most preferably" renders the claims vague and indefinite because they provide for examples within the claim language which is forbidden. Preferences and examples are properly set forth in the specification rather than the claims: please see section 2173.05(d) in the MPEP 8th Ed., Rev. 3, Aug. 2005.

Art Unit: 1754

- b) In claim 5, the phrase "much preferred" renders the claim vague and indefinite because it provides for examples within the claim language which is forbidden: please see section 2173.05(d) in the MPEP 8th Ed., Rev. 3, Aug. 2005.
- c) In claims 5, 8 and 11, the phrase "especially" renders the claim vague and indefinite because it provides for examples within the claim language which is forbidden: please see section 2173.05(d) in the MPEP 8th Ed., Rev. 3, Aug. 2005.
- d) In claims 6, 8, 11, 14 and 19, the phrase "in particular" renders the claim vague and indefinite because it provides for examples within the claim language which is forbidden: please see section 2173.05(d) in the MPEP 8th Ed., Rev. 3, Aug. 2005.
- e) In claim 7, the phrase "e. g." renders the claim vague and indefinite because it provides for examples within the claim language which is forbidden: please see section 2173.05(d) in the MPEP 8th Ed., Rev. 3, Aug. 2005.
- f) In claim 9, the phrase "usually at least. . ." renders the claim vague and indefinite because it provides for examples within the claim language which is forbidden: please see section 2173.05(d) in the MPEP 8th Ed., Rev. 3, Aug. 2005.
- g) Claims 2, 3, 7, 9, 10, 13 and 15 are vague and indefinite because they recite a narrower range within a broader range within the same claim: please see section 2173.05c) in the MPEP 8th Ed. Rev. 3, Aug. 2005.
- h) In claim 10, the dimension "m" is vague and indefinite.
- i) In claims 13, 14, 16, 17, 18 and 19, the phrase "in particular according to claim. ." renders the claims vague and indefinite because it is not clear whether these claims are independent claims or are dependent claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, 10, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by the article titled “Flame-made ceria nanoparticles” by Madler et al. bearing a handwritten publication date of 06/2002.

The Madler article in the abstract sets forth that flame spray pyrolysis was used to synthesize ceria from cerium acetate in acetic acid solution. The paragraph titled “A. Precursor solution composition and process conditions” sets forth that ceria powders contained nanoparticles smaller than 10 nm. The paragraph titled “II. Experimental” sets forth that the droplets have a size ranging from 7 to 15 μm .

The following references are made of record:

U. S. Pat. App'n. Pub. No. US 2005/0227864 A1 disclosing mixed metal oxide particles made by liquid feed flame spray pyrolysis, and

U. S. Pat. App'n. Pub. No. US 2004/0050207 A1 disclosing the gas phase synthesis of nanoparticles in a flame burner.

Art Unit: 1754

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy C Vanoy
Timothy C Vanoy
Patent Examiner
Art Unit 1754

tv